

## REMARKS

### Claim Rejections

The Examiner has rejected claims 24-25, 29-35 and 36-39 under 35 U.S.C. § 102(b) as being anticipated by Christen et al. (U.S. Patent No. 5,904,957). The Examiner has also rejected claims 37 and 41-42 under 35 U.S.C. § 103(a) as being unpatentable over Christen et al. The Examiner has also rejected claim 35 under 35 U.S.C. § 103(a) as being unpatentable over Christen et al. in view of Porter (U.S. Patent No. 5,626,680). The Examiner has also rejected claim 40 under 35 U.S.C. § 103(a) as being unpatentable over Christen et al. in view of Liu (U.S. Patent No. 6,403,491) and Porter. The Examiner has also rejected claim 26 under 35 U.S.C. § 103(a) as being unpatentable over Christen et al. in view of Murugesh (U.S. Patent No. 6,450,117).

Applicants have carefully considered the Examiner's comments. As a result, Applicants have amended claim 24 to further clarify the scope of the invention. In particular, the claims now clearly recite that the passageway that passes gas to the outer region is below the top surface of the base plate.

Applicants' amendments address the issues raised by the Examiner in the Response to Arguments. In the Examiner's response, the Examiner argued that one could partially load the furnace in order to meet the limitation that the passageway is located below the lowest porous structure. The Examiner also argued that Applicants' claim limitations with respect to the lowest porous structure were intended use limitations that do not limit the scope of the claim.

However, Applicants' claim amendments address each of the issues raised by the Examiner. The position of the passageway is now positively recited as being below the top surface of the base plate. The base plate supports the stack of porous structures, and the top surface of the base plate is below the lowest porous structure. The claim amendments as now presented are clearly not intended use limitations since the position of the passageway is directly tied to a furnace component, not the lowest porous structure per se. Thus, even if the prior art were used in a different way as argued by the Examiner, for example, by partially loading the furnace in Christen et al.,

the limitations of Applicants' claims would still not be disclosed because the passageway is required to be below the top surface of the base plate.

Furthermore, there is no basis in the record for the Examiner's hypothetical rearranging of Christen et al. There is no disclosure in Christen et al. that one of skill in the art would be motivated to partially load the furnace by loading porous structures in the top portion of the furnace and leaving the bottom portion of the furnace empty. In fact, this would be contrary to the well-accepted objective of making as many parts as possible during each cycle in order to lower per unit part costs. For this reason alone, it would be illogical to leave the bottom part of the furnace empty and not use this valuable furnace space. Christen et al. clearly recognizes this and teaches away from the Examiner's hypothetical because the furnace in Christen et al. is fully filled with porous structures, not partially filled with an empty bottom portion. Moreover, it is far from clear whether this hypothetical would achieve the predetermined first and second portions of gas that are claimed. It is more likely that this would result in uncontrolled gas flows in the center opening region and the outer region like a conventional furnace.

Applicants respectfully submit that the claim amendments presented above place the application in condition for allowance. The Examiner has not shown that Christen et al. discloses a passageway below the top surface of the base plate. Because the prior art of record does not disclose all of the limitations of claim 24 as now presented, claim 24 is allowable and all prior art rejections should be withdrawn. The remaining claims depend from claim 24. Because claim 24 is allowable, claims 25-27 and 29-42 are also allowable since these claims incorporate all of the limitations of claim 24. Any further arguments that could be made at this time in support of Applicants' dependent claims would be superfluous and unnecessary. Accordingly, dependent claims 25-27 and 29-42 should also be allowed. *In re Fine*, 837 F.2d 1071, 1076 (Fed. Cir. 1988); *W.L. Gore & Associates, Inc. v. Garlock, Inc.*, 721 F.2d 1540, 1555 (Fed. Cir. 1983).

## **Conclusion**

Applicants have amended claim 24 to put the application in condition for allowance. None of the prior art of record discloses the limitations of Applicants' claims as now presented. Thus, Applicants' claims are allowable. If the Examiner has any questions, the Examiner may call Applicants' attorney, Richard E. Stanley, Jr., at 312-

321-4279. Accordingly, Applicants request reconsideration and allowance of the application.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Richard E. Stanley, Jr.", is positioned above a horizontal line.

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